CLAIMS

What is claimed is:

1. A method, including:

separating, in a frequency domain, a combined plurality P of asynchronous data streams received at substantially a same time into a separated plurality of data streams.

2. The method of claim 1, further including:

converting the combined plurality P of asynchronous data streams from a time domain into the frequency domain prior to the separating.

3. The method of claim 1, further including:

receiving, at substantially the same time, the combined plurality P of asynchronous data streams at a plurality Q of antennas.

4. The method of claim 1, further including:

separating the combined plurality P of asynchronous data streams into the separated plurality of data streams in the frequency domain using a frequency spatial demapper.

5. The method of claim 1, wherein the separated plurality of data streams correspond directly to a number of wireless channels.

6. The method of claim 1, wherein at least one of the separated plurality of data streams is formatted according to one of an Institute of Electrical and Electronics Engineers 802.11 standard and an Institute of Electrical and Electronics Engineers 802.16 standard.

7. The method of claim 1, further including:

synchronizing at least one of the separated plurality of data streams in the time domain.

8. An article including a machine-accessible medium having associated information, wherein the information, when accessed, results in a machine performing:

separating, in a frequency domain, a combined plurality P of asynchronous data streams received at substantially a same time into a separated plurality of data streams.

9. The article of claim 8, wherein the separating is performed by a wireless access point.

10. The article of claim 8, wherein the information, when accessed, results in the machine performing:

computing a frequency response for a number of channels corresponding to the plurality P of asynchronous data streams.

11. The article of claim 8, wherein the information, when accessed, results in the machine performing:

converting the separated plurality of data streams in the frequency domain into a separated plurality of data streams in the time domain.

12. The article of claim 8, wherein the information, when accessed, results in the machine performing:

synchronizing at least one of the separated plurality of data streams after detecting a presence of a short preamble.

13. The article of claim 12, wherein the information, when accessed, results in the machine performing:

estimating a coarse frequency offset.

14. An apparatus, including:

a module to separate, in a frequency domain, a combined plurality P of asynchronous data streams received at substantially a same time into a separated plurality of data streams.

15. The apparatus of claim 14, wherein the module to separate further includes:

a spatial demultiplexer to provide the separated plurality of data streams.

16. The apparatus of claim 14, wherein the module to separate further includes:

a module to perform a fast Fourier transform on the combined plurality P of asynchronous data streams; and

a module to perform an inverse fast Fourier transform on at least one of the separated plurality of data streams.

17. The apparatus of claim 14, further including:

a synchronization module to receive at least one of the separated plurality of data streams after processing by a module capable of performing an inverse fast Fourier transform.

18. The apparatus of claim 14, wherein at least one of the separated plurality of data streams is formatted according to one of an Institute of Electrical and Electronics Engineers 802.11 standard and an Institute of Electrical and Electronics Engineers 802.16 standard.

19. An apparatus, including:

a module to perform a fast Fourier transform on a combined plurality P of asynchronous data streams;

a spatial demultiplexer to provide a separated plurality of data streams associated with the combined plurality P of asynchronous data streams; and

a module to perform an inverse fast Fourier transform on at least one of the separated plurality of data streams so as to separate, in a frequency domain, the combined plurality P of asynchronous data streams received at substantially a same time into the separated plurality of data streams.

20. The apparatus of claim 19, wherein at least some of the separated plurality of data streams include a plurality of orthogonal frequency division multiplexed symbols.

21. The apparatus of claim 19, wherein a frequency offset associated with a first data stream included in the separated plurality of data streams is different than a frequency offset associated with a second data stream included in the plurality of separated data streams.

22. A system, including:

a module to separate, in a frequency domain, a combined plurality P of asynchronous data streams received at substantially a same time into a separated plurality of data streams; and

a plurality Q of antennas to receive the combined plurality P of asynchronous data streams.

23. The system of claim 22, wherein the plurality Q of antennas form a portion of a multiple-input, multiple-output (MIMO) system.

24. The system of claim 22, further including:

a wireless access point coupled to the plurality Q of antennas.

25. The system of claim 24, wherein the wireless access point is to train at least one channel for at least some of a plurality of P users associated with the combined plurality P of asynchronous data streams.

26. The system of claim 22, further including:

a processor to form a Q x P channel matrix.